



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/578,079

05/03/2006

Timm Herman

16-571P/US

4771

27441 7590 06/18/2009
TAROLLI, SUNDHELM, COVELL & TUMMINO, LLP
1300 EAST NINTH STREET
SUITE 1700
CLEVELAND, OH 44114

EXAMINER

NICHOLS II, ROBERT K

ART UNIT

PAPER NUMBER

3754

MAIL DATE

DELIVERY MODE

06/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,079	Applicant(s) HERMAN, TIMM	
	Examiner ROBERT K. NICHOLS II	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/09/2008, 02/04/2008, 07/03/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: Claim 1, line 7 recites “perimeteraly” which appears to be a misspelling of the word perimetrically. Appropriate correction is required.

Claim 1 is objected to because of the following informalities: Claim 1, lines 8, 10 and 14 recite “perimeteral” which appears to be a misspelling of the word perimetral. Appropriate correction is required.

Claim 3 is objected to because of the following informalities: Claim 3, lines 12 and 13 recite “perimeteral” which appears to be a misspelling of the word perimetral. Appropriate correction is required.

Claim 7 is objected to because of the following informalities: Claim 7, line 7 recite “perimeteral” which appears to be a misspelling of the word perimetral. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-6 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, line 7 recites “the bore a shoulder.” It is unclear as to what applicant is claiming, rendering the claim indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9, 10, 12-14, 16-18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 2,702,220).

Regarding claims 1, 3, 7 and 21, Johnson discloses a piston comprising unitary body 2 of circular cross section including spaced face and back surfaces (figs. 2 and 4); an axial bore 11 extending between the surfaces; the face surface including a nose section 7 surrounding the through bore 11 and an annular recess section 8 surrounding the nose section 7, the recess section being perimetraly surrounded by a continuous lip 6; a perimetral surface extending axially from the face to the back surface; and the perimetral and face surfaces together defining a perimetral lip 6 around the concave section (figs. 1, 2 and 4), the lip 6 being of tapering thickness tapering from its thickest part at a location nearest the back surface forwardly to a thin termination at a juncture of the face and perimetral surfaces (figs. 1, 2 and 4); an annular disc/camming washer 15 positioned in the annular recess section (fig. 1); and the disc including a peripheral

Art Unit: 3754

surface coactable with the lip 6 to transmit comprising forces against the lip 6 and thence against a surrounding wall of a cylinder 1 where the piston is in use (see figure 1 and column 2, lines 16-27). Johnson further discloses a counterbore (i.e. o-ring 12 bore, see fig. 2) extending from the back surface towards the face surface; and a shoulder being an annular drive section circumscribing the bore 11 and adapted to engage a push rod 3 in force transmitting relationship (see figures 1, 2 and 4).

Regarding claims 2 and 4, Johnson discloses the lip 6 flares outwardly as it intends in a forward direction relative to the force and back surfaces (see figure 1 and column 2, lines 16-27).

Regarding claim 5, Johnson discloses the piston 2 being a plastic piston (see column 1, lines 58-60).

Regarding claims 9, 13 and 17, Johnson discloses the annular disc/camming washer 15 includes an outwardly tapering thickness such that the annular disc/camming washer 15 is thickest at its perimeter (see figure 1).

Regarding claims 10, 14 and 18, Johnson discloses the annular disc/camming washer 15 being made from a metal (column 1, line 80).

Regarding claims 12, 16 and 20, Johnson discloses an elastic member 14 placed between the annular disc/camming washer 15 and the body 2 (see figure 1).

Art Unit: 3754

Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Breitenstein (US 3,102,455).

Regarding claims 7 and 8, Breitenstein discloses a piston assembly including; a main body 50 having an axial bore for receipt of a push rod; the body 50 having a face including an annular recess and a an endless lip 51 surrounding the recess (fig. 4); a camming washer 53 disposed at least in the part in the recess (fig. 3), the washer 53 including a perimetral camming surface 54 engageable with the lip 51; and the body 50 and washer 53 being connected together for limited relative axial movement when the piston assembly is advanced against material in a cartridge 10 to dispense such material (fig. 1), such relative movement being effective to cause the camming surface 54 to force the lip 51 outwardly into tight engagement with a wall of such cartridge 10 (see column 3, lines 46-59). Breitenstein further discloses a motor drive push rod 22 (see figures 1, 3 and column 1, lines 49-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 2,702,220)

Art Unit: 3754

Regarding claim 6, Johnson discloses all the elements of the claimed invention but is silent to the plastic being Delran. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the piston of the Johnson device of Delran, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 11, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 2,702,220) in view of Norheim (US 2003/0010202).

Regarding claims 11, 15 and 19, Johnson discloses all the elements of the claimed invention except the annular disc/camming washer being made from a polymer.

Norheim teaches a piston including a unitary body 10 of circular cross section having spaced face and back surfaces; the face surface including a nose section 12 surrounding a through bore and an annular recess section surrounding the nose section 12 (see figure 2), the recess section being perimateraly surrounded by a continuous lip 16; a plastic annular disc/camming washer 20 positioned in the annular recess section (fig. 1); and the disc including a peripheral surface coactable with the lip 16 to transmit comprising forces against the lip 16 and thence against a surrounding wall of a cylinder 1 where the piston is in use (see figure 1 and paragraph 20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the annular disc/camming washer of the Johnson device of plastic, since it has been held to be within the general skill of a worker in the

Art Unit: 3754

art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cramer (US 772,457), Johansen (US 2,246,685), Kiesel (US 5,941,162), Karasinski (US 1,894,771), Sadler et al. (US 3,092,427), Koester (US 2,701,172), Nelson (US 3,143,934), Hill (US 1,386,333), Tyler (US 1,796,415), Bockius (US 1,769,984) and Robards, Jr et al. (US 5,323,931) show other devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT K. NICHOLS II whose telephone number is (571)270-5312. The examiner can normally be reached on Mon-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. K. N./
Examiner, Art Unit 3754

/Kevin P. Shaver/
Supervisory Patent Examiner, Art
Unit 3754